

Serial No.: 10/780,369
Atty. Docket No.: D5162

IN THE CLAIMS:

1. (Currently Amended): A load support and transfer platform for installation on a mobile, rectangular bed having an end, the load support and transfer platform comprising:

first, second and third segments disposed one adjacent to the next in alignment with the end of the rectangular bed, the first and second segments being connected to one another by a first articulating hinge and the second and third segments being connected to one another by a second articulating hinge;

an extension mechanism for moving the first, second and third segments as a unit ~~partially~~ off the rectangular bed by way of the end so that the first and second segments are off the mobile, rectangular bed and the third segment remains substantially supported on the bed;

each of the first, second and third segments having an independently actuable conveyor forming an upper surface of ~~its~~ the respective segment and operable to allow transfer an object supported by one of the segments ~~to be transferred to an adjacent segment, to vary spacing between adjacent objects on different segments and, or with respect to the first segment, to move an object~~ off the load support and transfer platform from the first segment; and

a positioning mechanism operable when the first and second segments are clear of the mobile, rectangular bed for rotating the first segment relative to the second segment on the first articulating hinge and for further rotating the second segment relative to the third segment on the second articulating

Serial No.: 10/780,369
Atty. Docket No.: D5162

hinge to lower the first segment below the rectangular bed while keeping the first segment level.

2. (Currently amended): The load support and transfer platform as set forth in claim 1, further comprising:

a truck trailer providing the mobile, rectangular bed and having an ~~open-able~~ openable end corresponding to the end of the mobile, rectangular bed off which the platform may be moved.

3. (Previously Amended): The load support and transfer platform as set forth in claim 2, further comprising:

a controller for extending and retracting the first, second and third segments and for operating the conveyors to move a last in object to the first segment for deposition of the last in object on an external surface, the controller being responsive to inputs for moving all of a plurality of objects supported on the load support and transfer platform toward the first segment and cutting movement of the conveyor for the third segment to separate the last in object from the remaining objects while continuing to move the last in object toward the first segment.

4. (Currently Amended): The load support and transfer platform as set forth in claim 3, further comprising:

the first segment being located closest to the ~~open-able~~ openable end of the trailer when the load support and transfer platform is fully retracted;

Serial No.: 10/780,369
Atty. Docket No.: D5162

the second segment being intermediate to the first and third segments; and

the third segment being located farthest from the ~~open-able~~ openable end of the trailer when the load support and transfer platform is fully retracted.

5. (Previously Amended): The load support and transfer platform as set forth in claim 4, further comprising:

the controller providing for retracting the first, second and third segments into the trailer while the conveyor for the first segment continues to move the last in object off the first segment at zero velocity relative to the external surface.

6. (Cancelled)

7. (Currently Amended): Apparatus comprising:

a trailer;

a main conveyor section providing a support surface for cargo;

a mid conveyor section abutting the main conveyor section to allow the cargo to be moved between the main conveyor section and the mid conveyor section;

Serial No.: 10/780,369
Atty. Docket No.: D5162

an end conveyor section abutting the mid conveyor section to allow the cargo to be moved between the end conveyor section and the mid conveyor section;

a track installed on the trailer;

the main, mid and end conveyor sections being supported on the track for horizontal movement on and off the trailer to and from a position where the main, mid and end conveyor sections are supported on the track and a position where the mid and end conveyor sections are clear of the track;

the mid conveyor section and main conveyor section being articulated allowing the mid conveyor section to rotate up to about ninety degrees from the main conveyor section;

the end conveyor section and mid conveyor section being articulated allowing the end conveyor section to rotate up to about ninety degrees to remain parallel to the main section while the mid conveyor section is rotated on the main conveyor section; and

an independently operable drive motor for each of the main, mid and end conveyor sections to allow articles to be passed between the main and the mid conveyor sections and between the mid and end conveyor sections, to allow articles to be transferred from the end conveyor section to the ground, and to vary spacing between articles supported on different conveyor sections.

Serial No.: 10/780,369
Atty. Docket No.: D5162

8. (Previously Amended): Apparatus as claimed in claim 7, further comprising:

a trailer suspension control system allowing trailer height to be adjusted.

9. (Previously Amended): Apparatus as claimed in claim 8, further comprising:

a controller for extending the main, mid and end conveyor sections from the trailer as a unit; and

the controller further providing, responsive to operator inputs, for adjusting the trailer height and rotation of the mid and end conveyor sections to place the end conveyor section on a target surface for unloading an object from the trailer.

10. (Previously Amended): Apparatus as claimed in claim 9, further comprising:

the controller providing for selecting from independent and coordinated movement of the main, mid and end conveyor sections for repositioning, modifying spacing between and off loading objects.

11. (Currently Amended): A trailer onboard handling system for discrete units of freight comprises:

a segmented, translatable platform, movable as a unit;

a main segment of the translatable platform for supporting the discrete units during shipping;

Serial No.: 10/780,369
Atty. Docket No.: D5162

a mid segment of the translatable platform attached for rotation on an axis provided by a first horizontal joint to the main segment;

an end segment of the translatable platform attached for rotation to the mid segment on a second horizontal joint parallel to the first horizontal joint;

a conveyor forming a principal upper surface of each of the segments;

the conveyors being aligned from segment to segment to allow cooperative movement, respacing and off loading of the discrete units on and between the segments and off of the end segment; and

a platform translation system for extending and retracting the translatable platform from an open end of the trailer to a position where the mid and end segments are off the trailer.

12. (Original): A trailer onboard handling system as claimed in claim 11, further comprising:

a rotation system for the mid and end segments allowing the end segment to be lowered to and placed flat on an external target surface.

13. (Original): A trailer onboard handling system as claimed in claim 12, further comprising:

a trailer suspension system allowing the trailer to be raised and lowered.